

CLAIMS

What is claimed is:

1. An interface circuitry for connecting a data storage device to a computer, said interface circuitry comprising:

3 a parallel data line for transferring parallel data between the data storage device and the computer;

4 a multi-mode, parallel/serial data line for selectively transferring parallel or serial data between the data storage device and the computer;

5 a switching circuit, connected to said parallel/serial data line, having first and second selectable modes of operation, said switching circuit being connectable to the computer; and

6 a data transfer mode selection circuit connected to said switching circuit, said mode selection circuit for sending a parallel mode selection signal to said switching circuit for placing said switching circuit in said first mode of operation, wherein parallel data is transferable between the storage device and the computer over both the parallel data line and the parallel/serial data line, said mode selection circuit for sending a serial mode selection signal to said switching circuit for placing said switching circuit in said second mode of operation, wherein serial data is transferable between the storage device and the computer over said parallel /serial data line.

1 2. The interface circuitry of claim 1, wherein the interface circuitry is electrically connected to an Advanced Technology Attachment/Integrated Drive Electronics (ATA/IDE) bus in the computer.

1 3. The interface circuitry of claim 2, wherein the data transfer mode selection circuit is 2 electrically connected to the switching circuit through the ATA/IDE bus.

3 4. The interface circuitry of claim 1, wherein the interface circuitry is connected to a docking 4 station.

1 5. The interface circuitry of claim 1, wherein the data transfer mode selection circuit is
2 electrically connected to the switching circuit via a conductor, oriented between the computer and
3 the data storage device, that is non-dedicated to the data transfer mode selection circuit.

4 6. A computer comprising:

5 a central processing complex (CPC) including a central processing unit, a memory and a
6 memory and Input/Output (I/O) controller;

7 a data storage device;

8 an interface circuitry coupled between said data storage device and said CPC, said interface
9 circuitry including:

10 a parallel data line for transferring parallel data between said data storage device and
11 said CPC;

12 a multi-mode, parallel/serial data line for selectively transferring parallel or serial data
13 between the data storage device and said CPC;

14 a switching circuit, connected to said parallel/serial data line, having first and second
15 selectable modes of operation; and

16 a data transfer mode selection circuit connected to said switching circuit, said mode
17 selection circuit for sending a parallel mode selection signal to said switching circuit for placing said
18 switching circuit in said first mode of operation, wherein parallel data is transferable between the
19 storage device and said CPC over both the parallel data line and the parallel/serial data line, said
20 mode selection circuit for sending a serial mode selection signal to said switching circuit for placing
21 said switching circuit in said second mode of operation, wherein serial data is transferable between
22 said storage device and said CPC over said parallel /serial data line.

1 7. The computer of claim 6, wherein the interface circuitry is electrically connected to an
2 Advanced Technology Attachment/Integrated Drive Electronics bus.

1 8. The computer of claim 6, wherein the interface circuitry is connected to a docking station.

1 9. The computer of claim 6, wherein the data transfer mode selection circuit is electrically
2 connected to the switching circuit through the interface circuitry.

1 10. The computer of claim 6, wherein the data transfer mode selection circuit is electrically
2 connected to the switching circuit via a conductor, oriented between the computer and the data
3 storage device, that is non-dedicated to the data transfer mode selection circuit.

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4 11. A docking station for use with a computer having a central processing complex (CPC)
5 including a central processing unit, a memory and a memory and Input/Output (I/O) controller; a
6 computer interface circuitry connectable between an external data storage device and said CPC, said
7 computer interface circuitry including a parallel data line for transferring parallel data between said
8 external data storage device and said CPC, a multi-mode, parallel/serial data line for selectively
9 transferring parallel or serial data between said external data storage device and said CPC; a
10 switching circuit, connected to said parallel/serial data line, having first and second selectable modes
11 of operation, said docking station comprising:

12 a storage device interface connectable to said external data storage device, said storage device
13 interface being connectable to said computer interface circuitry by a plurality of conductors; and

14 a data transfer mode selection circuit connectable to said switching circuit, said data transfer
15 mode selection circuit for sending a parallel mode selection signal to said switching circuit for
16 placing said switching circuit in said first mode of operation, wherein parallel data is transferable
17 between said external data storage device and said CPC over both said parallel data line and said
18 parallel/serial data line, said data transfer mode selection circuit for sending a serial mode selection
19 signal to said switching circuit for placing said switching circuit in said second mode of operation,
20 wherein serial data is transferable between said external data storage device and said CPC over said
21 parallel /serial data line, wherein said docking station is capable of interfacing said external data
22 storage device to said computer whether said external data storage device is a serial data storage
23 device or a parallel data storage device.

1 12. The docking station of claim 11, wherein said computer interface is electrically connected
2 to an Advanced Technology Attachment/Integrated Drive Electronics bus in said computer.

1 13. The docking station of claim 11, wherein said data transfer mode selection circuit is
2 electrically connected to said switching circuit through said storage device interface.

1 14. The docking station of claim 11, wherein said parallel data line is electrically connected to
2 a Central Processor Unit- Input/Output (CPU-I/O) interface circuit of said computer via an Advanced
3 Technology Attachment/Integrated Drive Electronics bus.

4 15. The docking station of claim 11, wherein said serial data line is electrically connected to a
5 Central Processor Unit-Input/Output (CPU-I/O) interface circuit of said computer via an Advanced
6 Technology Attachment/Integrated Drive Electronics bus.

7 16. The docking station of claim 11, wherein said data transfer mode selection circuit is
8 electrically connected to said switching circuit via a conductor, from said plurality of conductors,
9 that is non-dedicated to said data transfer mode selection circuit.